THE Comm

Keyword Abbreviations

KEYWORD	ABBREVIATION	TOKEN
ABS	A{shft B}	182
AND	A{shft N}	175
ASC	A{shft S}	198
ATN	A{shft T}	193
CHR$	C{shft H}	199
CLOSE	CL{shft O}	160
CLR	C{shft L}	156
CMD	C{shft M}	157
CONT	C{shft O}	154
COS	none	190
DATA	D{shft A}	131
DEF	D{shft E}	150
DIM	D{shft I}	134
END	E{shft N}	128
EXP	E{shft X}	189
FN	none	165
FOR	F{shft O}	129
FRE	F{shft R}	184
GET	G{shft E}	161
GET#	none	161
GO	none	203
GOSUB	GO{shft S}	141
GOTO	G{shft O}	137
IF	none	139
INPUT	none	133
INPUT#	I{shft N}	132
INT	none	181
LEFT$	LE{shft F}	200
LEN	none	195
LET	L{shft E}	136
LIST	L{shft I}	155
LOAD	L{shft O}	147
LOG	none	188

KEYWORD	ABBREVIATION	TOKEN
+	none	170
−	"	171
*	"	172
/	"	173
↑	"	174
>	"	177
=	"	178
<	"	179
π	"	255

Color Codes

COLOR 64	ASCII	POKE	COLOR 20
BLACK	144	0	BLACK
WHITE	5	1	WHITE
RED	28	2	RED
CYAN	159	3	CYAN
PURPLE	156	4	PURPLE
GREEN	30	5	GREEN
BLUE	31	6	BLUE
YELLOW	158	7	YELLOW
ORANGE	129	8	ORANGE
BROWN	149	9	Lt. ORANGE
Lt. RED	150	10	PINK
GRAY	151	11	Lt. CYAN
Med. GRAY	152	12	Lt. PURPLE
Lt. GREEN	153	13	Lt. GREEN
Lt. BLUE	154	14	Lt. BLUE
Lt. GRAY	155	15	Lt. YELLOW

C-64
Screen 53281 Border 53280 Text 646

MID$	M{shft I}	202
NEW	none	162
NEXT	N{shft E}	130
NOT	N{shft O}	168
ON	none	145
OPEN	O{shft P}	159
OR	none	176
PEEK	P{shft E}	194
POKE	P{shft O}	151
POS	none	185
PRINT	?	153
PRINT#	P{shft R}	152
READ	R{shft E}	135
REM	none	143
RESTORE	RE{shft S}	140
RETURN	RE{shft T}	142
RIGHT$	R{shft I}	201
RND	R{shft N}	187
RUN	R{shft U}	138
SAVE	S{shft A}	148
SGN	S{shft G}	180
SIN	S{shft I}	191
SPC(	S{shft P}	166
SQR	S{shft Q}	186
STATUS	ST	
STEP	ST{shft E}	169
STOP	S{shft T}	144
STR$	ST{shft R}	196
SYS	S{shft Y}	158
TAB(	T{shft A}	163
TAN	none	192
THEN	T{shft H}	167
TIME	TI	
TIME$	TI$	
TO	none	164
USR	U{shft S}	183
VAL	V{shft A}	197
VERIFY	V{shft E}	149
WAIT	W{shft A}	146

VIC-20
Screen/Border 36879, (screen times 16 + border + 8). Text 646 (note:text and border colors 0–8 only).

Sound

C-64 Sound

		Range
SI = 54265		[SID chip start]
V = voice number		1–3
Volume: POKE 54296,X		0–15
Notes:		
Hi	POKE SI + V*7 + 1,X	1–255
Low	POKE SI + V*7,X	1–255
Wave:		
	POKE SI + V*7 + 4,X	1–255
X = 17 triangle		X = 65 pulse
X = 33 sawtooth		X = 129 noise
Amplitude: (for pulse wave)		
Hi	POKE SI + V*7 + 3,X	0–255
Low	POKE SI + V*7 + 2,X	0–15
Attack/Decay:		A = 0–15
POKE SI + V*7 + 5,(A*16 + D)		D = 0–15
Sustain/Release:		S = 0–15
POKE SI + V*7 + 6,(S*16 + R)		R = 0–15

VIC-20 Sound

SI = 36873	[sound start]
V = voice number	1–4
Volume: POKE 36878,X	0–15
Notes: POKE SI + V,X	128–255

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SOURCE
For Home Computing

ASCII Codes

COMMAND	ASCII	SCREEN
A	65	1
B	66	2
C	67	3
D	68	4
E	69	5
F	70	6
G	71	7
H	72	8
I	73	9
J	74	10
K	75	11
L	76	12
M	77	13
N	78	14
O	79	15
P	80	16
Q	81	17
R	82	18
S	83	19
T	84	20
U	85	21
V	86	22
W	87	23
X	88	24
Y	89	25
Z	90	26
{	91	27
£	92	28
}	93	29
↑	94	30
←	95	31
space	32	32
!	33	33

COMMAND	ASCII	SCREEN
Crsr Dn	none	17
Crsr Up	"	145
Crsr Rt	"	29
Crsr Lf	"	157
Home	"	19
Clear	"	147
Delete	"	20
Insert	"	148
Rvs On	"	18
Rvs Off	"	146
Return	"	13
Shft Ret	"	141
Space	"	32
Shft Spc	"	160
Up/Low	"	14
Up/Graph	"	142
Stop	"	3
Lock	"	8
Unlock	"	9
Funct 1	"	133
Funct 2	"	134
Funct 3	"	135
Funct 4	"	136
Funct 5	"	137
Funct 6	"	138
Funct 7	"	139
Funct 8	"	140

Sprites

S = 12288 [Data start]
V = 53248 [VIC II start]

Disk Commands

Format a New Diskette:

```
OPEN 15,8,15
PRINT#15,"N0:name,id"
CLOSE 15
```

Initialize:

```
OPEN 15,8,15
PRINT#15,"I"
CLOSE15
```

Validate:

```
OPEN 15,8,15
PRINT#15,"V"
CLOSE15
```

Save a Program:

```
SAVE"name",8
```

Save with Replace:

```
SAVE"@0:name",8
```

Load Basic Program:

```
LOAD"name",8
```

Load Machine Lang. Program:

```
LOAD"name",8,1
```

List the Directory:

```
LOAD"$",8
LIST
```

Scratch a Program:

"	34	34
#	35	35
$	36	36
%	37	37
&	38	38
'	39	39
(	40	40
)	41	41
*	42	42
+	43	43
,	44	44
–	45	45
.	46	46
/	47	47
0	48	48
1	49	49
2	50	50
3	51	51
4	52	52
5	53	53
6	54	54
7	55	55
8	56	56
9	57	57
:	58	58
;	59	59
<	60	60
=	61	61
>	62	62
?	63	63
@	64	64

N = sprite number [0–7]

Set pointer:
```
POKE 2040 + N,S/64 + N
```

Turn On:
```
POKE V + 21,PEEK(V + 21)
    OR (2↑N)
```

Turn Off:
```
POKE V + 21,PEEK(V + 21)
    AND (255 – 2↑N)
```

Set Color: [0–15]
```
POKE V + 39 + N,C
```

Position
Y axis: [0–255]
```
POKE V + (N*2 + 1),Y
```

X axis < 255: [0–255]
```
POKE V + (N*2),X
```

X axis > 255: [256–511]
```
POKE V + 16, (2↑N):
    POKE V + (N*2),X–255
```

```
OPEN15,8,15
PRINT#15,"S0:name"
CLOSE15
```

Rename a Program:
```
OPEN 15,8,15
PRINT#15,"R0:
newname = oldname"
CLOSE15
```

Copy a Program:
```
OPEN 15,8,15
PRINT#15,"C0:
newname = 0:oldname"
CLOSE15
```

Read Error Channel:
```
10 OPEN15,8,15:
   INPUT#15,A,B$,
   C,D:PRINTA,B$,
   C,D:CLOSE15
RUN
```